

AMENDMENT TO THE CLAIMS:

The following claim set replaces all prior versions, and listings, of claims in the application:

1. (previously presented) A method of generating a flame in a combustion zone of a rotary kiln comprising:
 - (a) providing a rotary kiln having a kiln wall which defines a combustion zone within the rotary kiln, and a burner which comprises at least a burner tube having a front end located outside the kiln wall of the rotary kiln and extending therefrom through the kiln wall into the rotary kiln to a discharge end located inside the rotary kiln within the combustion zone thereof, and a burner lance for introducing fuel into the burner tube for combustion with primary air to generate a flame at the discharge end of the burner tube within the combustion zone of the rotary kiln;
 - (b) generating a flue gas by a gas turbine located outside the kiln wall;
 - (c) directing the flue gas generated by the gas turbine to the burner tube so that the flue gas is used as primary air for combustion of the fuel introduced into the burner tube by the burner lance; and
 - (d) combusting the fuel using the flue gas as primary air to generate a flame at the discharge end of the burner tube in the combustion zone of the rotary kiln.
2. (previously presented) A method according to claim 1, wherein the flue gas generated by the turbine has a temperature of 400-800 °C.
3. (previously presented) A method according to claim 1, which comprises feeding the fuel by the burner lance into the discharge end of the burner tube.

4. (currently amended) A method according to claim 1, ~~wherein the method which~~ comprises feeding the fuel by the burner lance into the discharge front end of the burner tube, and mixing the fuel with the flue gas at the discharge end as primary air generated by the gas turbine.
5. (currently amended) A method ~~according to claim 1, which comprises of~~ generating a flame in a combustion zone of a rotary kiln comprising:
 - (a) providing a rotary kiln having a kiln wall which defines a combustion zone within the rotary kiln, and a burner which comprises at least a burner tube having a front end located outside the kiln wall of the rotary kiln and extending therefrom through the kiln wall into the rotary kiln to a discharge end located inside the rotary kiln within the combustion zone thereof, and a burner lance for introducing fuel into the burner tube for combustion with primary air to generate a flame at the discharge end of the burner tube within the combustion zone of the rotary kiln;
 - (b) generating a flue gas by a gas turbine located outside the kiln wall;
 - (c) directing the flue gas generated by the gas turbine to the burner tube so that the flue gas is used as primary air for combustion of the fuel introduced into the burner tube by the burner lance;
 - (d) combusting the fuel using the flue gas as primary air to generate a flame at the discharge end of the burner tube in the combustion zone of the rotary kiln; and
 - (e) feeding the flue gas as primary air generated by the gas turbine via a connecting tube tangentially disposed relative to the burner tube so that the flue gas as primary air is fed into the burner tube tangentially, and wherein the method further comprises feeding the fuel into the connecting tube operatively associated with ~~so as to establish~~ a cyclone-shaped intermediate ~~burner in part of~~ burner in part of the burner tube.

6. (previously presented) A rotary kiln comprising:
a kiln wall which defines a combustion zone within the rotary kiln, and
a burner for generating a flame in the combustion zone of the rotary kiln, wherein
the burner comprises,
- (i) at least a burner tube having a front end located outside the kiln wall of the rotary kiln and extending therefrom through the kiln wall into the rotary kiln to a discharge end located inside the rotary kiln within the combustion zone thereof;
 - (ii) a burner lance for feeding fuel into the burner tube for combustion with primary air to generate a flame at the discharge end of the burner tube within the combustion zone of the rotary kiln;
 - (iii) a gas turbine located outside the kiln wall of the rotary kiln for generating a flue gas in response to combustion of a fuel therein; and
 - (iv) a connecting tube which connects the gas turbine to the burner tube to direct the flue gas generated by the gas turbine into the burner tube for use as primary air for combustion of the fuel introduced to the burner tube and thereby generate a flame at the discharge end of the burner tube in the combustion zone of the rotary kiln.
7. (previously presented) A rotary kiln according to claim 6, wherein the connecting tube is inclined in relation to the burner tube.
8. (previously presented) A rotary kiln according to claim 6, wherein the connecting tube is positioned axially in relation to the burner tube.
9. (previously presented) A rotary kiln according to claim 6, wherein the connecting tube is tangential in relation to the burner tube.

10. (currently amended) A rotary kiln according to claim ~~[[6]]~~ 9, wherein the burner unit further comprises means for introducing fuel into the connecting tube for increasing a the temperature in the burner tube.
11. (previously presented) A rotary kiln according to claim 6, wherein the burner tube, the connecting tube and the gas turbine are constructed as a unit capable of adjustable positioning in relation to the rotary kiln.
12. (currently amended) A rotary kiln according to claim 11, wherein the unit further comprises a cooling air fan for introducing cooling air to the burner tube.
13. (previously presented) A rotary kiln according to claim 6, wherein the burner lance is concentrically positioned within the burner tube.
14. (previously presented) A rotary kiln according to claim 13, wherein the burner lance feeds fuel into the burner tube at the discharge end thereof.
15. (currently amended) A rotary kiln according to claim 13, wherein the burner lance feeds fuel into the burner tube at the discharge ~~front~~ end thereof for mixing with the flue gas as primary air directed to the discharge end of the burner tube from the gas turbine by the connecting tube.
16. (previously presented) A method according to claim 1, which comprises concentrically positioning the burner lance within the burner tube.
17. (previously presented) A method according to claim 16, which comprises feeding fuel into the burner tube at the discharge end thereof.
18. (currently amended) A method ~~according to claim 16, which comprises of~~ generating a flame in a combustion zone of a rotary kiln comprising:
 - (a) providing a rotary kiln having a kiln wall which defines a combustion zone within the rotary kiln, and a burner which comprises at least a burner tube

having a front end located outside the kiln wall of the rotary kiln and extending therefrom through the kiln wall into the rotary kiln to a discharge end located inside the rotary kiln within the combustion zone thereof, and a burner lance concentrically positioned within the burner tube for introducing fuel into the burner tube for combustion with primary air to generate a flame at the discharge end of the burner tube within the combustion zone of the rotary kiln;

- (b) generating a flue gas by a gas turbine located outside the kiln wall;
- (c) directing the flue gas generated by the gas turbine to the burner tube so that the flue gas is used as primary air for combustion of the fuel introduced into the burner tube by the burner lance;
- (d) feeding fuel into the burner tube ~~at the front end thereof~~ and mixing the fuel with ~~the flue gas~~ as primary air generated by the gas turbine within the burner tube; and
- (e) combusting the fuel using the flue gas as primary air to generate a flame at the discharge end of the burner tube in the combustion zone of the rotary kiln.

19. (new) A rotary kiln comprising:

a kiln wall which defines a combustion zone within the rotary kiln, and
a burner unit for generating a flame in the combustion zone of the rotary kiln,
wherein the burner unit comprises,

- (i) at least a burner tube having a front end located outside the kiln wall of the rotary kiln and extending therefrom through the kiln wall into the rotary kiln to a discharge end located inside the rotary kiln within the combustion zone thereof;
- (ii) a burner lance for feeding fuel into the burner tube for combustion with primary air to generate a flame at the discharge end of the burner tube within the combustion zone of the rotary kiln;

- (iii) a gas turbine located outside the kiln wall of the rotary kiln for generating a flue gas in response to combustion of a fuel therein;
- (iv) a connecting tube which connects the gas turbine to the burner tube to direct the flue gas generated by the gas turbine into the burner tube for use as primary air for combustion of the fuel introduced to the burner tube and thereby generate a flame at the discharge end of the burner tube in the combustion zone of the rotary kiln; and
- (v) means for introducing fuel into the connecting tube for increasing the temperature in the burner tube.